ACCESSION #: 9907160174

NON-PUBLIC?: N

LICENSEE EVENT REPORT (LER)

FACILITY NAME: Limerick Generating Station, Unit 1 PAGE: 1 OF 3

DOCKET NUMBER: 05000352

TITLE: RPS and ESF Actuations Caused by Personnel Error During

Turbine Routine Testing

EVENT DATE: 06/11/1999 LER #: 1999-005-00 REPORT DATE: 07/09/1999

OTHER FACILITIES INVOLVED: DOCKET NO: 05000

OPERATING MODE: 1 POWER LEVEL: 1000%

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR SECTION:

50.73(a)(2)(iv)

LICENSEE CONTACT FOR THIS LER:

NAME: K.P. Bersticker, Manager - Experience

Assessment TELEPHONE: (610) 718-3400

COMPONENT FAILURE DESCRIPTION:

CAUSE: SYSTEM: COMPONENT: MANUFACTURER:

REPORTABLE EPIX:

SUPPLEMENTAL REPORT EXPECTED: NO

ABSTRACT:

On June 11, 1999 at 19:29 hours, Limerick Generating Station (LGS) Unit 1 was operating at 100% power. An equipment operator performing a routine test, "Backup Overspeed And Power/Load Unbalance Test" in the auxiliary equipment room failed to place the backup overspeed trip interlock keylock switch to the "TEST" position before depressing the test push button. Failing to bypass the interlock resulted in a Turbine Stop

Valve Fast Closure Scram signal. The weekly test verifies proper function of the Backup Overspeed Trip Circuit and Power/Load Unbalance Trip Circuit for continued reliable operation of the main turbine. The root cause for the turbine trip and subsequent reactor scram was personnel error.

The plant was brought to a normal, safe shutdown condition and the appropriate notifications were made. There was no effect on the safe operation of the plant.

Reactor Protection System (RPS) and Engineered Safety Feature (ESF) actuations as a result of this event are reportable pursuant to 10CFR50.73(a)(2)(iv).

Unit Conditions Prior to the Event:

Unit 1 was in Operational Condition (OPCON) 1 (Power Operation) at 100%

power.

Description of the Event:

On June 11, 1999 at 19:29 hours, an Equipment Operator (EO) was performing

a weekly Routine Test for the turbine backup overspeed and power/load

unbalance circuitry. The EO inserted the key to bypass the trip

circuitry, however the switch was not actuated prior to arming and

depressing the test pushbutton. The test pushbutton activated a turbine

trip and a full Reactor Protection System (RPS) [EIIS:JC] scram on Turbine

Stop Valve fast closure. All control rods fully inserted. In addition to

an automatic reactor scram, the appropriate automatic Primary Containment

and Reactor Vessel Isolation Control System (PCRVICS) isolations, an

Engineered Safety Feature (ESF), occurred on low RPV water level. Reactor

level decreased, due to void collapse, to a level of -35 inches. Top of

active fuel is -161. In addition to the appropirate isolations, there

were additional level 2 (-38 inches) isolations due to a 'level ringing"

phenomenon. Instrument line (water level) ringing is a phenomenon which results in sensed water level spikes which may cause initiation, isolation and trip signals. The phenomenon is associated with the pressure wave resulting from rapid pressurization events. No safety relief valves lifted during this event.

A four hour notification was made to the NRC at 22:50 on June 11, 1999, in accordance with the requirements of 10CFR50.72(b)(2)(ii) since this event resulted in an automatic ESF and RPS actuations.

Analysis of the Event:

A turbine trip at 100% power is an analyzed event. The RIPS and all other plant systems operated appropriately. The reactor remained in a stable condition for the entire event with cooldown proceeding to facilitate restarting of the recirculation pumps. There were no adverse effects on the safe operation of the plant.

Cause of the Event:

The cause of this event was personnel error in that the EO inserted the key into the keylock, but did not turn it to the "TEST" position. The EO armed the collar of the test pushbutton believing the keylock to be in the correct position.

Corrective Actions:

1. The "Backup Overspeed and Power/Load Unbalance Test" routine test procedure was revised to include peer checker requirements and provide appropriate precautions that the performance of steps out of

order could result in a turbine trip.

2. The Equipment Operator who performed the test was counseled.

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3. Operations training will include this event in upcoming operator requalification sessions by 8/20/99, ensuring that all personnel are aware of the operation of the backup overspeed test circuitry.

4. Routine and Surveillance tests performed by Operations have been reviewed explicitly to identify peer checking, and double verification requirements.

5. A review will be conducted to identify other non fault tolerant system Tests that could result in a significant plant transient by mis-operation by 9/30/99. Those non fault tolerant system tests with the highest probability to create a plant transient will have those procedures revised by 11/1/99.

Previous Similar Occurrences:

NONE

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PECO NUCLEAR

A Unit of PECO Energy

Michael P. Gallagher, P.E.

Plant Manager

Limerick Generating Station

PECO Energy Company

Limerick Generating Station

PO Box 2300

Sanatoga, PA 19464-0920

610 718 2000

10CFR50.73

July 12, 1999

Docket No. 50-352

License No. NPF-39

U.S. Nuclear Regulatory Commission

Attn.: Document Control Desk

Washington, DC 20555

SUBJECT: Licensee Event Report

Limerick Generating Station - Unit 1

This LER reports Reactor Protection System (RPS) and Primary Containment and Engineered Safety Feature (ESF) actuations that resulted from personnel error during the performance of a routine test.

Reference: Docket No. 50-352

Report Number: 1-99-005

Revision Number: 00

Event Date: June 11, 1999

Report Date July 12, 1999

Facility: Limerick Generating Station

P.O. Box 2300, Sanatoga, PA 19464

This LER is being submitted pursuant to the requirements of

10CFR50.73(a)(2)(iv).

Very truly yours,

cc: H. J. Miller, Administrator Region 1, USNRC

A. L. Burritt, USNRC Senior Resident Inspector, LGS

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